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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,980	06/06/2002	Harald Grewe	(H)01PH0405USP	5962
7590	11/04/2004		EXAMINER SQUIRES, BRETT S	
M Robert Kestenbaum 11011 Bermuda Dunes N E Albuquerque, NM 87111			ART UNIT 2836	PAPER NUMBER

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/018,980

**Applicant(s)**

GREWE ET AL.

**Examiner**

Brett S Squires

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/06/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

1. The substitute specification, abstract, and amended claims filed in the preliminary amendment on June 6, 2002 have been received by the examiner. The substitute specification does not conform to 37 CFR 1.125(b) and has not been entered, a statement that the substitute specification includes no new matter has not been received.

2. Claims 32 and 35 will be treated as independent claims because they fail to further limit the apparatus claimed in claim 21, and claim 39 will be treated as an independent claim because it fails to further limit the apparatus in claim 34.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the function of each module and apparatus as described in the specification. The blocks representing the modules and apparatuses must be labeled with text indicating the function of each block. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and

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where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The industry standard EN 50254, which is used throughout the specification and the claims, must be clearly cited in the specification with the date the standard was issue, the body that issued the standard, and the full name of the standard itself.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The standard "EN 50254" in claim 34 is a relative term which renders the claim indefinite. The standard "EN 50254" is not defined by the claim, the specification does

not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A copy of the EN 50254 standard has not been provided for the examiner to review.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 21-23 and 25-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Ying (US 6,147,967).

Ying discloses a method and apparatus (figure 6 ref# 603 and 642) for modules (figure 7A-8G ref# 703 and 705) connected to a supply voltage in series (figure 7A-8G ref# 704 and col. 14 lines 22-32) for fault isolation of an automation bus system (col. 1 lines 6-39 and col. 2 lines 36-53) having a voltage supply input (figures 7A-8G), a voltage supply output (figures 7A-8G), a relay for connecting the supply voltage input to the supply voltage output (figure 6 ref# 644a, 644b, figures 7A-8G ref# 712, col. 14 lines 3-9 and 22-32), in response to an ascertaining device ("CPU" figure 3 ref# 315, figure 6 ref# 612,622, col. 5 lines 34-67, col. 10 lines 9-34, col. 13 lines 60-67, col. 14 lines 1-21) for ascertaining at least one electrical variable for detecting a short circuit.

Regarding Claim 27:

Ying discloses an apparatus (figure 6 ref# 603 and 642) configurable manually and through the automation bus system having a central processing unit and a memory (figure 6 ref# 612, 618, col. 3 lines 34-64, col. 10 lines 9-34).

Regarding Claim 31:

In the above stated paragraphs Ying discloses that the apparatus is able to detect short circuits, a ground fault is a type of short circuit, thus the apparatus would be able to detect a ground fault because it is able to detect short circuits.

Regarding Claim 33:

Ying discloses an automation bus system (col. 1 lines 6-39 and col. 2 lines 36-53) that is able to be configured as a serial bus system (col. 21 lines 56-64).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 24 and 35-42 are rejected under 35 U.S.C. 103(a) as being obvious over Ying (US 6,147,967) and Schminke (US 4,594,634).

Ying discloses the above stated apparatus for fault isolation of an automation bus system, but does not disclose the apparatus is arranged to detect a flowing supply current.

Schminke discloses a current measuring device (figure 1 ref# 5) that outputs a measurement signal proportional to the load current to a limit detector (figure 1 ref# 4) in which a predetermined limit of the load current is stored and as soon as this limit is exceeded the limit detector supplies a signal to the switching control unit which opens the switch (figure 1 ref# 26) connecting the device to the voltage source (col. 4 lines 9-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in Ying an over-current protection device such as that taught by Schminke in order to protect the automation bus system from being damaged by the high currents caused by a overloading the bus and short circuits. Ying discloses protecting the automation bus system against short circuits during a short circuit the supply voltage is pulled down while the current dramatically increases, thus short circuits can be easily identified by over-current protection device disclosed by Schminke.

Regarding Claim 39-42:

Ying discloses a method for connecting and operating series-connected apparatuses in a control and data transmission installation starting with a first apparatus ("master node" figures 8A-8G ref# 703), then connecting the subsequent apparatuses

("slave nodes" figure 8A-8G ref# 705) to the automation bus system automatically (col. 14 lines 34-67 and col. 15 lines 1-22).

Ying further discloses that an error message is output to the automation control bus in order to control the bus system when an apparatus indicates a short circuit (col. 11 lines 36-62) and the error message comprises data identifying the apparatus (col. 0 lines 16-33).

11. Claim 34 is rejected under 35 U.S.C. 103(a) as being obvious over Ying (US 6,147,967) and the EN 50254 standard.

Ying discloses the above stated apparatus for fault isolation of an automation bus system with at least a first module ("first-tier slave node" figure 5 ref# 523C) connected to the supply voltage in series comprises an associated apparatus in a local bus section or bus spur (col. 6 lines 65-67 and col. 7 lines 1-18), but does not disclose the automation bus system complies with the EN 50254 standard.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ying to comply with the EN 50254 standard to allow the automation bus system to be sold in Europe.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. Additional prior art of interest includes but is not limited to the



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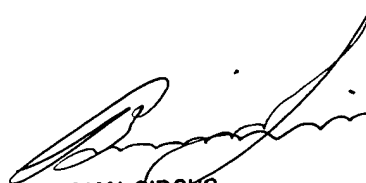
following US Patents and Publications, Foreign Patents and Publications and Non-patent Literature: US 6,347,252, US 6,590,755, US 6,466,539, and US 5,598,149.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett S Squires whose telephone number is (571)272-2268. The examiner can normally be reached on 8am-5:30pm Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2058. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brett S Squires  
Examiner  
Art Unit 2836



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